

# ***Mortality***



# Mortality

## An Overview: 2003

Total South Dakota Resident Deaths	7,109
Crude Death Rates per 100,000 population	
South Dakota	941.8
United States (Provisional)	830.0
Age-Adjusted Death Rates per 100,000 population	
South Dakota	819.2
United States (Provisional)	**N/A
Age-Adjusted YPLL Before Age 75 per 100,000 population	
Whites	6,357
American Indians	21,713

## Caution

In 1999, South Dakota along with the rest of the nation made two significant changes to the way mortality data were analyzed. These changes were the switch to using the 2000 U.S. Standard for age adjusting and using ICD-10 for disease classifications. As a result, comparison to prior reports is not possible. With the publication of this report, comparisons can be made between the reports from 1999 to 2002 and the data contained in this report.

Table 28 displays the deaths, crude death rates, and age-adjusted death rates for the United States and South Dakota for the past 20 years.

**Table 28**  
**Resident Deaths, Crude Death Rates, and Age-Adjusted Death Rates**  
**South Dakota and United States, 1984-2003**

Year	United States			South Dakota		
	Number	Crude Rate	Age-Adjusted Rate	Number	Crude Rate	Age-Adjusted Rate
2003	*2,423,000	*830.0	**N/A	7,109	941.8	819.2
2002	2,443,387	847.3	845.3	6,886	912.2	791.0
2001	2,416,425	848.5	854.5	6,915	916.1	796.3
2000	2,403,351	854.0	869.0	7,014	929.2	804.8
1999	2,391,399	857.0	875.6	6,941	997.3	799.1
1998	2,337,256	847.3	870.6	6,850	984.2	791.1
1997	2,314,245	848.8	878.1	6,855	984.9	790.2
1996	2,314,690	859.2	894.1	6,793	976.0	788.1
1995	2,312,132	868.3	909.8	6,901	991.5	798.0
1994	2,278,994	866.1	913.5	6,724	966.1	778.5
1993	2,268,000	872.8	926.1	6,774	973.3	787.1
1992	2,175,613	848.1	905.6	6,680	959.8	777.6
1991	2,169,518	857.6	922.3	6,636	953.4	768.9
1990	2,148,463	863.8	938.7	6,320	908.0	735.1
1989	2,150,466	871.3	950.5	6,534	916.3	760.5
1988	2,167,999	886.7	975.7	6,567	926.1	764.6
1987	2,123,323	876.4	970.0	6,658	940.4	778.2
1986	2,105,361	876.7	978.6	6,583	929.6	775.1
1985	2,086,440	876.9	988.1	6,604	935.7	774.5
1984	2,039,369	864.8	982.5	6,513	930.7	765.1

Note: \*U.S. 2003 data are provisional.

\*\*U.S. data not available

Crude death rates are per 100,000 population.

Age-adjusted rates are computed with the 2000 standard

Source: National Center for Health Statistics

South Dakota Department of Health

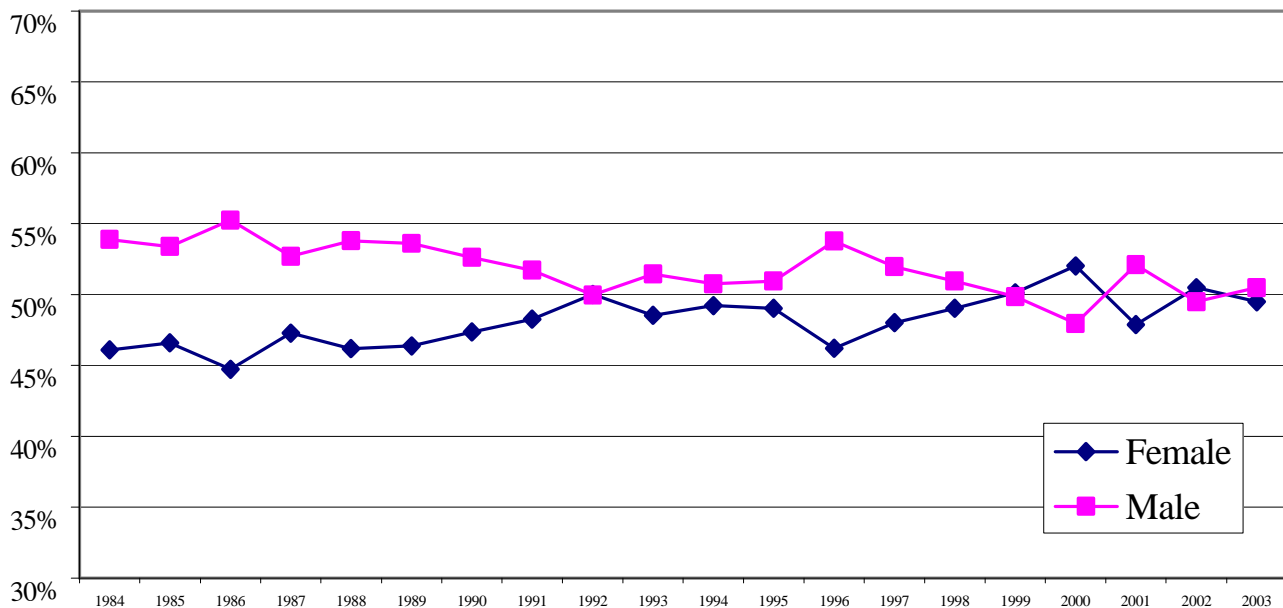
## Leading Causes of Death

The five leading causes of death in 2003 for South Dakota residents were heart disease, cancer, cerebrovascular diseases, accidents, and chronic lower respiratory diseases.

Heart disease accounted for 27.3 percent of South Dakota's 2003 resident deaths. Heart disease was the leading cause of death for South Dakota residents for men and women alike as well as whites and American Indians. Figure 8, below, illustrates that since 1984 women

accounted for over 40 percent of the South Dakota resident heart disease deaths and since 1999 women have had more deaths than men on two occasions. In 2003, men had a higher percentage of deaths due to heart disease than women. The American Heart Association (AHA) also reports the controllable risk factors that can reduce the risk of heart disease for both men and women include avoiding tobacco, maintaining a low-fat diet and engaging in regular physical activity (2).

**Figure 8**  
**Percent of South Dakota Resident Heart Disease Deaths**  
**by Gender, 1984 - 2003**



Source: South Dakota Department of Health

Cancer was the second leading cause of death and accounted for 23.1 percent of 2003 South Dakota resident deaths. The American Cancer Society states that while different cancers have different risk factors, it is advisable to avoid tobacco and strong sunlight while eating right, staying active, and maintaining a healthy weight (4).

Cerebrovascular diseases accounted for 6.7 percent of 2003 South Dakota resident deaths. Stroke, not specified as hemorrhage or infarction, caused the majority of the deaths for this type of disease. The National Stroke Association (NSA) reports that lifestyle changes such as preventing or treating high blood pressure, preventing or controlling

diabetes, preventing or managing heart disease, avoiding cigarette smoking, and controlling alcohol consumption and weight would decrease the number of strokes (5).

Accidents caused 5.5 percent of all South Dakota resident deaths in 2003. The two most common types of accidental deaths during the year were motor vehicle accidents causing 55.1 percent and falls accounting for 21.5 percent of accidents.

Chronic lower respiratory disease accounted for 5.3 percent of 2003 South Dakota resident deaths. Chronic lower respiratory diseases include emphysema

and chronic bronchitis. The primary cause of these diseases is cigarette smoking (3).

#### Mortality Patterns

Table 29, below, presents South Dakota resident leading causes of death by race. In 2003, patterns for the 10 leading causes of death varied by race. Seven of the 10 leading causes were the same for whites and American Indians, but they differed by rank. For example, cerebrovascular disease was the third leading cause of death at 7.0 percent for the white population, but seventh leading cause of death for the American Indian

**Table 29**  
**South Dakota Resident Leading Causes of Death**  
**by Race, 2003**

Cause of Death	All Races			White			American Indian		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
<b>South Dakota (All Deaths)</b>		<b>7,109</b>	<b>100.0</b>		<b>6,543</b>	<b>100.0</b>		<b>535</b>	<b>100.0</b>
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,942	27.3	1	1,829	28.0	1	106	19.8
Malignant Neoplasms (cancer) ....(C00-C97)	2	1,645	23.1	2	1,573	24.0	3	70	13.1
Cerebrovascular Diseases .....(I60-I69)	3	475	6.7	3	461	7.0	7	14	2.6
Accidents.....(V01-X59, Y85-Y86)	4	390	5.5	5	296	4.5	2	87	16.3
Chronic Lower Respiratory Diseases .....(J40-J47)	5	379	5.3	4	362	5.5	6	16	3.0
Influenza and Pneumonia.....(J10-J18)	6	223	3.1	6	210	3.2	*	*	*
Diabetes Mellitus .....(E10-E14)	7	201	2.8	7	174	2.7	4	26	4.9
Alzheimer's Disease .....(G30)	8	175	2.5	7	174	2.7	*	*	*
Organic, Including Symptomatic, Mental Disorders.....(F00-F09)	9	159	2.2	9	154	2.4	*	*	*
Nephritis, Nephrotic Syndrome, and Nephrosis....(N00-N07, N17-N19, N25-N27)	10	131	1.8	10	117	1.8	7	14	2.6
Chronic Liver Disease and Cirrhosis .....(K70, K73-K74)	*	*	*	*	*	*	5	26	4.9
Intentional Self-Harm (suicide) .....(X60-X84, Y87.0)	*	*	*	*	*	*	7	14	2.6
Congenital Malformations, Deformations, and Chromosomal Abnormalities .....(Q00-Q99)	*	*	*	*	*	*	7	14	2.6
All Other Causes	-	1,389	19.5	-	1,193	18.2	-	148	27.7

Note: Letter / number combinations following cause of death are ICD-10 codes.  
Due to rounding, disease-specific death rates may not sum to state death rate.  
\* This cause was not one of the ten leading causes of death for this race group.  
Source: South Dakota Department of Health

population at 2.6 percent. Alzheimer's disease, organic, including symptomatic, mental disorders and influenza and pneumonia are in the 10 leading causes of death for the white population, but not the American Indian population. Among the 10 leading causes of death for the American Indian population, but not for the white population were chronic liver disease, intentional self-harm (suicide), and congenital malformations, deformations, and chromosomal abnormalities.

In 2003, patterns for the 10 leading causes of death also varied by gender in South Dakota (Table 30, below). Eight of the 10 leading causes were the same for South Dakota's men and women, but they differed in rank. Intentional self-

harm (suicide) and chronic liver disease and cirrhosis were among the 10 leading causes of death for South Dakota's men, but not for women.

Likewise, Alzheimer's disease and organic, including symptomatic, mental disorders were among the 10 leading causes of death for South Dakota's women, but not for South Dakota's men. Men were also more likely to die in accidents than women were, while women were more likely to die from cerebrovascular disease than men.

When ranked together, intentional self-harm (suicide) and chronic liver disease and cirrhosis were not in the top 10 but when broken out by gender they were the eighth and tenth leading cause of death for men, respectively.

**Table 30**  
**South Dakota Resident Leading Causes of Death**  
**by Gender, 2003**

Cause of Death	All			Male			Female		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
<b>South Dakota (All Deaths)</b>		<b>7,109</b>	<b>100.0</b>		<b>3,554</b>	<b>100.0</b>		<b>3,555</b>	<b>100.0</b>
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,942	27.3	1	981	27.6	1	961	27.0
Malignant Neoplasm (cancer).....(C00-C97)	2	1,645	23.1	2	859	24.2	2	786	22.1
Cerebrovascular Diseases .....(I60-I69)	3	475	6.7	5	189	5.3	3	286	8.0
Accidents.....(V01-X59, Y85-Y86)	4	390	5.5	3	252	7.1	5	138	3.9
Chronic Lower Respiratory Diseases .....(J40-J47)	5	379	5.3	4	212	6.0	4	167	4.7
Influenza and Pneumonia.....(J10-J18)	6	223	3.1	7	91	2.6	7	132	3.7
Diabetes Mellitus.....(E10-E14)	7	201	2.8	6	100	2.8	9	101	2.8
Alzheimer's Disease .....(G30)	8	175	2.5	*	*	*	6	133	3.7
Organic, Including Symptomatic, Mental Disorders.....(F00-F09)	9	159	2.2	*	*	*	8	116	3.3
Nephritis, Nephrotic Syndrome, and Nephrosis...(N00-N07, N17-N19, N25-N27)	10	131	1.8	9	73	2.1	10	58	1.6
Intentional Self-Harm (suicide) .....(X60-X84, Y87.0)	*	*	*	8	84	2.4	*	*	*
Chronic Liver Disease and Cirrhosis .....(K70 & K73-K74)	*	*	*	10	47	1.3	*	*	*
All Other Causes	-	1,389	19.5	-	666	18.7	-	677	19.0

Note: Letter / number combinations following cause of death are ICD-10 codes.  
Due to rounding, disease-specific death rates may not sum to state death rate.  
\* This cause was not one of the ten leading causes of death for this gender.

Source: South Dakota Department of Health

Table 31, below, lists the five leading causes of death by age group. Excluding infants, accidents were the leading cause of death to age 44. The leading cause of death

for the 45 to 54, and 55 to 64 age groups was cancer. Heart disease was the leading cause of death for the 65 and over age group.

**Table 31**  
**South Dakota Resident Five Leading Causes of Death**  
**by Age Group, 2003**

Rank	All Ages	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 & Over
1	Heart Disease 1,942	Congenital Anomalies 26	Accidents 14	Accidents 15	Accidents 56	Accidents 44	Accidents 44	Malignant Neoplasms (cancer) 117	Malignant Neoplasms (cancer) 223	Heart Disease 1,653
2	Malignant Neoplasms (cancer) 1,645	Sudden Infant Death Syndrome 14	Congenital Anomalies 3	Malignant Neoplasms (cancer) 5	Intentional Self-Harm (suicide) 22	Intentional Self-Harm (suicide) 17	Malignant Neoplasms (cancer) 37	Heart Disease 93	Heart Disease 154	Malignant Neoplasms (cancer) 1,241
3	Cerebro-vascular Diseases 475	Short Gestation and Low Birth Weight 6	Assault (homicide) 3	Septicemia 3	Malignant Neoplasms (cancer) 9	Malignant Neoplasms (cancer) 13	Heart Disease 31	Accidents 64	Chronic Lower Respiratory Diseases 29	Cerebro-vascular Diseases 430
4	Accidents 390	Complications of Placenta, Cord, and Membranes 3	*	*	Assault (homicide) 5	Heart Disease 6	Intentional Self-Harm (suicide) 24	Chronic Liver Disease and Cirrhosis 23	Accidents 27	Chronic Lower Respiratory Diseases 339
5	Chronic Lower Respiratory Diseases 379	Accidents 3	*	*	Congenital Anomalies 4	Legal Intervention 3	Chronic Liver Disease and Cirrhosis 10	Intentional Self-Harm (suicide) 20	Diabetes Mellitus 23	Influenza and Pneumonia 203

Note: \*Cells with less than 3 events.

Source: South Dakota Department of Health

Table 32, page 44, shows the median age at death for South Dakota residents from the leading causes of death by race and gender. In 2003, the median age at death was 79 for all South Dakotans; for white residents the median age was 80, compared to 57 for American Indians. The overall median age at death

increased by 1 year for both whites and American Indians when compared to their overall median age at death in 2002. The median age at death in 2003 for South Dakota resident males and females was 76 and 83, respectively. This has not changed in the last four years.

**Table 32**  
**Median Age at Death for South Dakota Residents from the Leading Causes of Death**  
**by Race and Gender, 2003**

Cause of Death	Median Age at Death in Years				
	All	Race		Gender	
	Total Deaths	White	American Indian	Male	Female
<b>South Dakota (All Deaths)</b>	<b>79</b>	<b>80</b>	<b>57</b>	<b>76</b>	<b>83</b>
Heart Disease (I00-I09, I11, I13, I20-I51)	83	83	65	79	87
Malignant Neoplasms (cancer) (C00-C97)	75	75	68	75	75
Cerebrovascular Diseases (I60-I69)	84	84	67	81	86
Accidents (V01-X59, Y85-Y86)	47	53	30	46	54
Chronic Lower Respiratory Diseases (J40-J47)	78	79	71	77	80
Influenza and Pneumonia (J10-J18)	87	87	*	86	88
Diabetes Mellitus (E10-E14)	78	79	68	75	80
Alzheimer's Disease (G30)	88	88	*	*	89
Organic, Including Symptomatic, Mental Disorders (F00-F09)	90	90	*	*	90
Nephritis, Nephrotic Syndrome, and Nephrosis (N00-N07, N17-N19, N25-N27)	83	85	65	82	83
Chronic Liver Disease and Cirrhosis (K70, K73-K74)	*	*	52	56	*
Intentional Self-Harm (suicide) (X60-X84, Y87.0)	*	*	28	41	*
Congenital Malformations, Deformations, and Chromosomal Abnormalities (Q00-Q99)	*	*	**	*	*
All Other Causes	78	80	54	78	82

Note: Letter / number combinations following cause of death are ICD-10 codes.

\*This cause was not one of the ten leading causes of death for this race or gender.

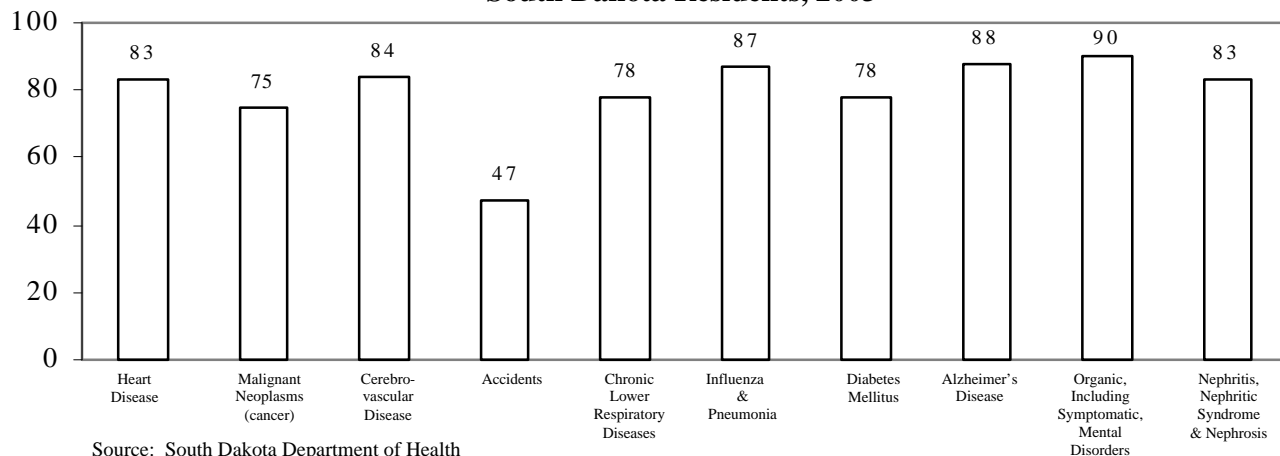
\*\*Cells with less than 3 events.

Source: South Dakota Department of Health

Figure 9, below, presents data on the median age at death for the 10 leading

causes of death for South Dakota residents in 2003.

**Figure 9**  
**Median Age at Death for the Ten Leading Causes of Death,**  
**South Dakota Residents, 2003**

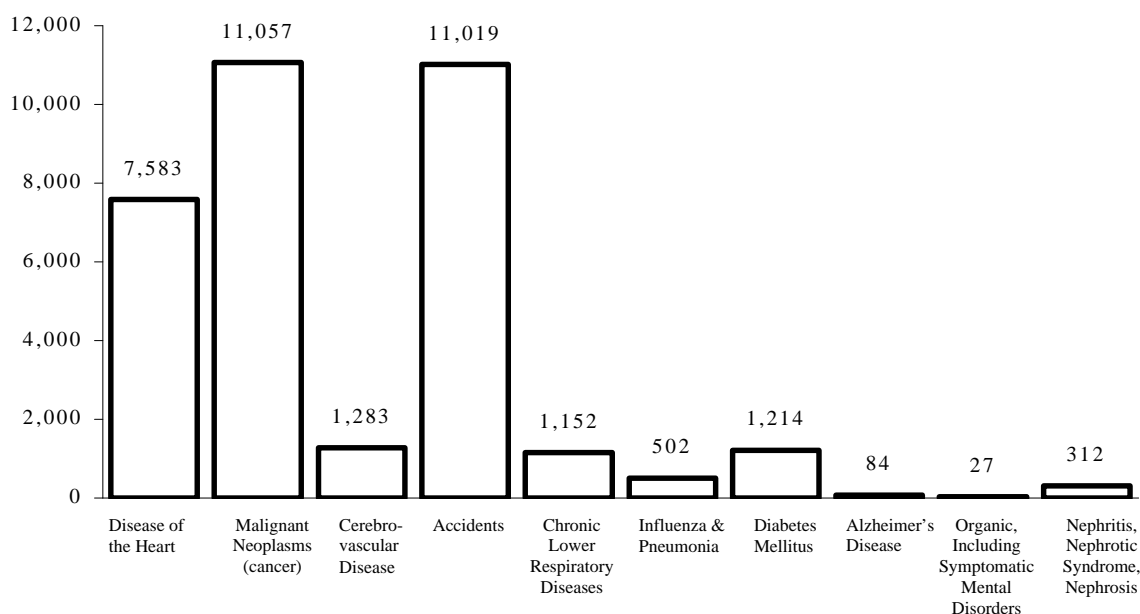


Source: South Dakota Department of Health

Figure 10, below, depicts the years of potential life lost (YPLL) before age 75 for each of these causes. Please refer to page 218 of the technical notes section for an explanation of how YPLL before

age 75 is calculated. Cancers lead in YPLL (11,057 years) because many of the decedents were at a relatively young age at the time of death.

**Figure 10**  
**Years of Potential Life Lost (YPLL) Before Age 75**  
**for the Ten Leading Causes of Death,**  
**South Dakota Residents, 2003**



Source: South Dakota Department of Health

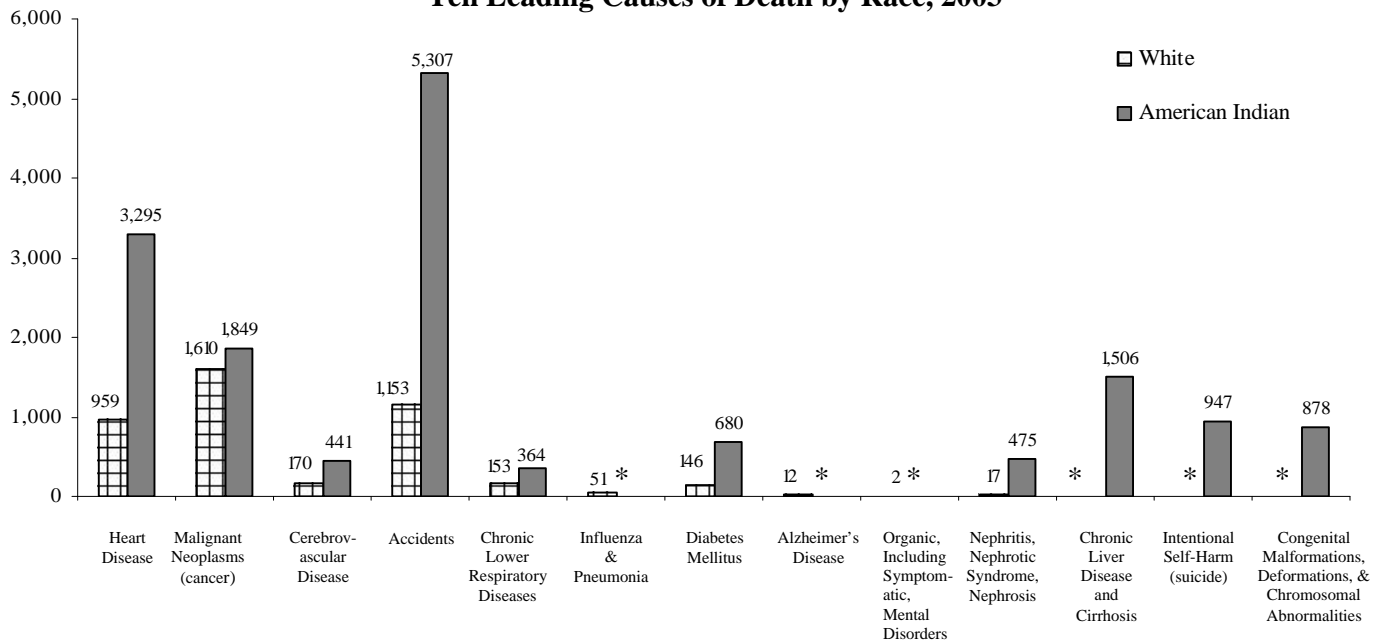
Figure 11, on the next page, illustrates the years of potential life lost (YPLL) before the age 75 per 100,000 population for the top 10 causes of death by race. When comparing YPLL by race, American Indians exceed whites substantially in YPLL for almost all causes of death.

American Indians' largest YPLL was accidents with 5,307 years while whites' largest YPLL was cancer with

1,610 years. Whites' second largest YPLL was accidents with 1,153 years while American Indians' second largest YPLL was heart disease with 3,295 years. Whites' third largest YPLL was heart disease with 959 years. Cancer was the third largest YPLL for American Indians with 1,849 years which still exceeded whites' largest YPLL (cancer).



**Figure 11**  
**Age-Adjusted Years of Potential Life Lost (YPLL) Before Age 75 for the**  
**Ten Leading Causes of Death by Race, 2003**



Note: Years of potential life lost are age-adjusted per 100,000 population.

\* This cause was not one of the ten leading causes of death for this race group.

Source: South Dakota Department of Health

Table 33, on the next page, lists South Dakota resident leading causes of death for the last five years. Heart disease, cancer, and cerebrovascular diseases have been the first, second, and third cause of death for the past five years. Chronic lower respiratory diseases and accidents have been fourth and fifth for the past five years. Influenza and pneumonia was ranked sixth every year except in 2001 when it was seventh. Diabetes mellitus was ranked seventh every year except in 2000 when it was eighth and in 2001 it was sixth. Alzheimer's disease was ranked eighth every year except in 2000 when it was seventh. Organic

including symptomatic, medical disorders was ranked ninth every year except in 2000 when it was tenth. Nephritis, nephritic syndrome, and nephrosis was ranked tenth the last two years. The five years also differ in which diseases are included in the top 10. For example, nephritis, nephrotic syndrome, and nephrosis is not included in the top 10 list for 2001 and 1999, however it ranks tenth in 2003 and 2002 and ninth in 2000. On the other hand, intentional self-harm ranks number 10 in 2001 and 1999 but it is not included in 2003, 2002, and 2000.

**Table 33**  
**South Dakota Resident Leading Causes of**  
**Death, 1999-2003**

Cause of Death	Total			2003			2002			2001			2000			1999		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
<b>South Dakota (All Deaths)</b>		<b>34,865</b>	<b>100.0</b>		<b>7,109</b>	<b>100.0</b>		<b>6,886</b>	<b>100.0</b>		<b>6,915</b>	<b>100.0</b>		<b>7,014</b>	<b>100.0</b>		<b>6,941</b>	<b>100.0</b>
Heart Disease .....(I00-I09, I11, I13, I20-I51)	1	9,980	28.6	1	1,942	27.3	1	1,933	28.1	1	1,984	28.7	1	2,105	30.0	1	2,016	29.0
Malignant Neoplasms (cancer).....(C00-C97)	2	8,043	23.1	2	1,645	23.1	2	1,561	22.7	2	1,598	23.1	2	1,604	22.9	2	1,635	23.6
Cerebrovascular Diseases .....(I60-I69)	3	2,589	7.4	3	475	6.7	3	518	7.5	3	491	7.1	3	561	8.0	3	544	7.8
Chronic Lower Respiratory Diseases.....(J40-J47)	4	1,846	5.3	5	379	5.3	4	382	5.5	5	360	5.2	4	387	5.5	5	338	4.9
Accidents .....(V01-X59, Y85-Y86)	5	1,774	5.1	4	390	5.9	5	344	5.0	4	382	5.5	5	318	4.5	4	340	4.9
Influenza and Pneumonia .....(J10-J18)	6	1,118	3.2	6	223	3.1	6	239	3.5	7	186	2.7	6	208	3.0	6	262	3.8
Diabetes Mellitus .....(E10-E14)	7	978	2.8	7	201	2.8	7	193	2.8	6	210	3.0	8	179	2.6	7	195	2.8
Alzheimer's Disease .....(G30)	8	839	2.4	8	175	2.5	8	169	2.5	8	159	2.3	7	180	2.6	8	156	2.2
Organic, Including Symptomatic, Mental Disorders.....(F00-F09)	9	699	2.0	9	159	2.2	9	144	2.1	9	135	2.0	10	125	1.8	9	136	2.0
Nephritis, Nephrotic Syndrome, and Nephrosis .....(N00-N07, N17-N19, N25-N27)	10	590	1.7	10	131	1.8	10	128	1.9	*	*	*	9	130	1.9	*	*	*
Intentional Self-Harm (suicide) .....(X60-X84, Y87.0)	*	*	*	*	*	*	*	*	*	10	108	1.6	*	*	*	10	103	1.5
All Other Causes		6,409	18.4		1,389	19.5		1,275	18.5		1,302	18.8		1,217	17.4		1,216	17.5

Note: Letter/number combinations following cause of death are ICD-10 codes.  
 Due to rounding disease-specific death rates may not sum to state death rate.  
 \*This cause was not one of the ten leading causes of death for this group.

Source: South Dakota Department of Health

Table 34, below and page 49, and Table 35, pages 50 and 51, display South Dakota resident deaths for 15 leading causes and selected components from 1999 to 2003.

Table 34 illustrates the number of deaths by causes and components, while Table 35 illustrates the same causes and components by crude death rates.

**Table 34**  
**South Dakota Resident Deaths for 15 Leading Causes**  
**and Selected Components, 1999-2003**

<b>Cause of Death</b>	<b>Total</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>
<b>All Causes</b>	<b>34,865</b>	<b>7,109</b>	<b>6,886</b>	<b>6,915</b>	<b>7,014</b>	<b>6,941</b>
<b>Disease of the Heart</b>	9,980	1,942	1,933	1,984	2,105	2,016
Acute Myocardial Infarction	3,519	697	633	685	739	765
All Other Forms of Chronic Ischemic Heart Disease	3,038	594	593	601	647	603
Heart Failure	1,052	185	207	218	246	196
Atherosclerotic Cardiovascular Disease	654	119	120	142	132	141
Hypertensive Heart Disease	105	23	20	22	24	16
Acute Rheumatic Fever and Chronic Rheumatic Heart Diseases	60	13	11	7	9	20
All Other Forms of Heart Disease	1,552	311	349	309	308	275
<b>Malignant Neoplasms (cancer)</b>	8,043	1,645	1,561	1,598	1,604	1,635
Trachea, Bronchus, and Lung	2,030	406	403	414	396	411
Colon, Rectum, and Anus	915	176	168	179	207	185
Female Breast	558	120	109	88	129	112
Prostate	547	106	109	115	101	116
Pancreas	458	95	85	99	82	97
Non-Hogkin's Lymphoma	383	68	54	83	94	84
Leukemia	359	80	67	72	66	74
Ovary	246	46	53	47	42	58
Meninges, Brain, and Other Parts of Central Nervous System	242	53	44	39	47	59
Multiple Myeloma and Immunoproliferative	190	43	42	32	45	28
Kidney and Renal Pelvis	188	39	35	44	36	34
Bladder	171	40	39	36	25	31
Esophagus	165	41	31	35	29	29
Liver and Intrahepatic Bile Ducts	151	29	30	36	24	32

Source: South Dakota Department of Health

**Table 34 (Cont.)**  
**South Dakota Resident Deaths for 15 Leading Causes**  
**and Selected Components, 1999-2003**

<b>Cause of Death</b>	<b>Total</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>
Stomach	138	22	33	27	29	27
Lip, Oral Cavity, and Pharynx	109	20	25	20	23	21
Melanoma of Skin	108	33	16	25	16	18
Corpus Uteri and Uterus, Part Unspecified	104	22	18	34	15	15
Larynx	46	12	10	6	8	10
Cervix Uteri	45	9	10	8	10	8
Ill-Defined, Secondary, and Unspecified Sites	411	76	87	77	81	90
All Other Cancers	479	109	93	82	99	96
<b>Cerebrovascular Diseases</b>	<b>2,589</b>	<b>475</b>	<b>518</b>	<b>491</b>	<b>561</b>	<b>544</b>
<b>Chronic Lower Respiratory Diseases</b>	<b>1,846</b>	<b>379</b>	<b>382</b>	<b>360</b>	<b>387</b>	<b>338</b>
<b>Accidents</b>	<b>1,774</b>	<b>390</b>	<b>344</b>	<b>382</b>	<b>318</b>	<b>340</b>
Motor Vehicle Accidents	931	215	185	187	177	167
All Other Accidents	843	175	159	195	141	173
<b>Influenza and Pneumonia</b>	<b>1,118</b>	<b>223</b>	<b>239</b>	<b>186</b>	<b>208</b>	<b>262</b>
<b>Diabetes Mellitus</b>	<b>978</b>	<b>201</b>	<b>193</b>	<b>210</b>	<b>179</b>	<b>195</b>
<b>Alzheimer's Disease</b>	<b>839</b>	<b>175</b>	<b>169</b>	<b>159</b>	<b>180</b>	<b>156</b>
<b>Organic, Including Symptomatic, Mental Disorders</b>	<b>699</b>	<b>159</b>	<b>144</b>	<b>135</b>	<b>125</b>	<b>136</b>
<b>Nephritis, Nephrotic Syndrome, and Nephrosis</b>	<b>590</b>	<b>131</b>	<b>128</b>	<b>102</b>	<b>130</b>	<b>99</b>
<b>Intentional Self-Harm (suicide)</b>	<b>503</b>	<b>103</b>	<b>94</b>	<b>108</b>	<b>95</b>	<b>103</b>
<b>Chronic Liver Disease and Cirrhosis</b>	<b>402</b>	<b>81</b>	<b>77</b>	<b>81</b>	<b>82</b>	<b>81</b>
<b>Septicemia</b>	<b>319</b>	<b>69</b>	<b>68</b>	<b>69</b>	<b>50</b>	<b>63</b>
<b>Aortic Aneurysm and Dissection</b>	<b>286</b>	<b>54</b>	<b>62</b>	<b>56</b>	<b>58</b>	<b>56</b>
<b>Parkinson's Disease</b>	<b>269</b>	<b>56</b>	<b>60</b>	<b>55</b>	<b>56</b>	<b>42</b>

Source: South Dakota Department of Health

**Table 35**  
**South Dakota Resident Crude Death Rates for 15 Leading Causes**  
**and Selected Components, 1999-2003**

Cause of Death	Total	2003	2002	2001	2000	1999
<b>All Causes</b>	<b>923.8</b>	<b>941.8</b>	<b>912.2</b>	<b>916.1</b>	<b>929.2</b>	<b>919.5</b>
<b>Disease of the Heart</b>	264.4	257.3	256.1	262.8	278.9	267.1
Acute Myocardial Infarction	93.2	92.3	83.9	90.7	97.9	101.3
All Other Forms of Chronic Ischemic Heart Disease	80.5	78.7	78.6	79.6	85.7	79.9
Heart Failure	27.9	24.5	27.4	28.9	32.6	26.0
Atherosclerotic Cardiovascular Disease	17.3	15.8	15.9	18.8	17.5	18.7
Hypertensive Heart Disease	2.8	3.0	2.6	2.9	3.2	2.1
Acute Rheumatic Fever and Chronic Rheumatic Heart Diseases	1.6	1.7	1.5	0.9	1.2	2.6
All Other Forms of Heart Disease	41.1	41.2	46.2	40.9	40.8	36.4
<b>Malignant Neoplasms (cancer)</b>	213.1	217.9	206.8	211.7	212.5	216.6
Trachea, Bronchus, and Lung	53.8	53.8	53.4	54.8	52.5	54.4
Colon, Rectum, and Anus	24.2	23.3	22.3	23.7	27.4	24.5
Female Breast	29.3	31.6	28.7	23.1	33.9	29.5
Prostate	29.2	28.3	29.1	30.7	27.0	31.0
Pancreas	12.1	12.6	11.3	13.1	10.9	12.9
Non-Hogkin's Lymphoma	10.1	9.0	7.2	11.0	12.5	11.1
Leukemia	9.5	10.6	8.9	9.5	8.7	9.8
Ovary	12.9	12.1	13.9	12.4	11.0	15.3
Meninges, Brain, and Other Parts of Central Nervous System	6.4	7.0	5.8	5.2	6.2	7.8
Multiple Myeloma and Immunoproliferative	5.0	5.7	5.6	4.2	6.0	3.7
Kidney and Renal Pelvis	5.0	5.2	4.6	5.8	4.8	4.5
Bladder	4.5	5.3	5.2	4.8	3.3	4.1
Esophagus	4.4	5.4	4.1	4.6	3.8	3.8
Liver and Intrahepatic Bile Ducts	4.0	3.8	4.0	4.8	3.2	4.2

Note: Crude death rates are per 100,000 population and based on the 2000 census.  
Source: South Dakota Department of Health

**Table 35 (Cont.)**  
**South Dakota Resident Crude Death Rates for 15 Leading Causes and Selected Components, 1999-2003**

<b>Cause of Death</b>	<b>Total</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>
Stomach	3.7	2.9	4.4	3.6	3.8	3.6
Lip, Oral Cavity, and Pharynx	2.9	2.6	3.3	2.6	3.0	2.8
Melanoma of Skin	2.9	4.4	2.1	3.3	2.1	2.4
Corpus Uteri and Uterus, Part Unspecified	5.5	5.8	4.7	8.9	3.9	3.9
Larynx	1.2	1.6	1.3	0.8	1.1	1.3
Cervix Uteri	2.4	2.4	2.6	2.1	2.6	2.1
Ill-Defined, Secondary, and Unspecified Sites	10.9	10.1	11.5	10.2	10.7	11.9
All Other Cancers	12.7	14.4	12.3	10.9	13.1	12.7
<b>Cerebrovascular Diseases</b>	68.6	62.9	68.6	65.0	74.3	72.1
<b>Chronic Lower Respiratory Disease</b>	48.9	50.2	50.6	47.7	51.3	44.8
<b>Accidents</b>	47.0	51.7	45.6	50.6	42.1	45.0
Motor Vehicle Accidents	24.7	28.5	24.5	24.8	23.4	22.1
All Other Accidents	22.3	23.2	21.1	25.8	18.7	22.9
<b>Influenza and Pneumonia</b>	29.6	29.5	31.7	24.6	27.6	34.7
<b>Diabetes Mellitus</b>	25.9	26.6	25.6	27.8	23.7	25.8
<b>Alzheimer's Disease</b>	22.2	23.2	22.4	21.1	23.8	20.7
<b>Organic, Including Symptomatic, Mental Disorders</b>	18.5	21.1	19.1	17.9	16.6	18.0
<b>Nephritis, Nephrotic Syndrome, and Nephrosis</b>	15.6	17.4	17.0	13.5	17.2	13.1
<b>Intentional Self-Harm (suicide)</b>	13.3	13.6	12.5	14.3	12.6	13.6
<b>Chronic Liver Disease and Cirrhosis</b>	10.7	10.7	10.2	10.7	10.9	10.7
<b>Septicemia</b>	8.5	9.1	9.0	9.1	6.6	8.3
<b>Aortic Aneurysm and Dissection</b>	7.6	7.2	8.2	7.4	7.7	7.4
<b>Parkinson's Disease</b>	7.1	7.4	7.9	7.3	7.4	5.6

Note: Crude death rates are per 100,000 population and based on the 2000 census.  
Source: South Dakota Department of Health

Table 36, below and page 53, displays age adjusted rates in South Dakota for the 15 leading causes and selected components.

The age adjusted rate for all causes of death in 2003 is 819.2 which is up from the age adjusted rate in 2002 of 791.0.

**Table 36**  
**South Dakota Resident Age-Adjusted Death Rates**  
**for 15 Leading Causes and Selected Components,**  
**2003**

<b>Cause of Death</b>	<b>Age-Adjusted Rate</b>
<b>All Causes</b>	<b>819.2</b>
<b>Disease of the Heart</b>	<b>217.3</b>
Acute Myocardial Infarction	80.3
All Other Forms of Chronic Ischemic Heart Disease	65.6
Heart Failure	19.5
Atherosclerotic Cardiovascular Disease	12.5
Hypertensive Heart Disease	2.4
Acute Rheumatic Fever and Chronic Rheumatic Heart Diseases	1.5
Hypertensive Heart and Renal Disease	0.4
Diseases of Pericardium and Acute Myocarditis	0.4
Acute and Subacute Endocarditis	0.3
All Other Forms of Heart Disease	34.3
<b>Malignant Neoplasms (cancer)</b>	<b>197.1</b>
Trachea, Bronchus, and Lung	49.0
Colon, Rectum, and Anus	20.7
Female Breast	27.2
Prostate	31.4
Pancreas	11.2
Leukemia	9.6
Non-Hogkin's Lymphoma	7.8
Meninges, Brain, and Other Parts of Central Nervous System	6.8
Ovary	10.0
Multiple Myeloma and Immunoproliferative	5.2
Esophagus	5.1
Bladder	4.6
Kidney and Renal Pelvis	4.8
Melanoma of Skin	4.1
Liver and Intrahepatic Bile Ducts	3.6
Stomach	2.7
Corpus Uteri and Uterus, Part Unspecified	4.5
Lip, Oral Cavity, and Pharynx	2.5
Larynx	1.5

Note: Age-adjusted rates are computed with the 2000 standard.  
Source: South Dakota Department of Health

**Table 36 (Cont.)**  
**South Dakota Resident Age-Adjusted Death Rates**  
**for 15 Leading Causes and Selected Components,**  
**2003**

<b>Cause of Death</b>	<b>Age-Adjusted Rate</b>
Cervix Uteri	2.2
Hodgkin's Disease	1.1
Ill-Defined, Secondary, and Unspecified Sites	8.9
All Other Cancers	12.3
<b>Cerebrovascular Diseases</b>	<b>51.9</b>
<b>Accidents</b>	<b>49.8</b>
Motor Vehicle Accidents	28.5
All Other Accidents	21.3
<b>Chronic Lower Respiratory Diseases</b>	<b>43.8</b>
<b>Influenza and Pneumonia</b>	<b>23.7</b>
<b>Diabetes Mellitus</b>	<b>23.6</b>
<b>Alzheimer's Disease</b>	<b>18.1</b>
<b>Organic, Including Symptomatic, Mental Disorders</b>	<b>16.2</b>
<b>Nephritis, Nephritic Syndrome, and Nephrosis</b>	<b>14.3</b>
<b>Intentional Self-Harm (suicide)</b>	<b>13.8</b>
<b>Chronic Liver Disease and Cirrhosis</b>	<b>10.8</b>
<b>Septicemia</b>	<b>7.9</b>
<b>Parkinson's Disease</b>	<b>6.2</b>
<b>Aortic Aneurysm and Dissection</b>	<b>6.1</b>

Note: Age-adjusted rates are computed with the 2000 standard.  
Source: South Dakota Department of Health

Table 37, on the next page, displays the breakdown of accidental deaths for the last five years. In 2003, there were 390 accidental deaths. There are two main types of accidental death, motor vehicle or other causes of accidental death.

The highest motor vehicle death in 2003 was car occupant with 112 deaths. The highest death in the other causes of accidental death in 2003 was falls with 84 deaths.



**Table 37**  
**South Dakota Resident Leading Causes of Death Due to Accidents, 1999-2003**

	Total	Year of Death				
		2003	2002	2001	2000	1999
<b>Total Deaths</b>	<b>1,774</b>	<b>390</b>	<b>344</b>	<b>382</b>	<b>318</b>	<b>340</b>
Motor Vehicle Accidents.....	931	215	185	187	177	167
Car Occupant.....(V40-V49)	524	112	106	95	107	104
Occupant of Pick-Up Truck or Van.....(V50-V59)	167	44	37	36	22	28
Pedestrian.....(V01-V09)	79	14	11	17	21	16
Motorcycle Rider.....(V20-V29)	56	14	12	13	10	7
Occupant of Special All-Terrain Vehicle.....(V86)	44	11	9	11	6	7
All Other Motor Vehicle Accidents	61	20	10	15	11	5
Other Causes of Accidental Death.....	843	175	159	195	141	173
Falls.....(W00-W19)	373	84	74	99	50	66
Accidental Threats to Breathing (excl. drowning).....(W75-W84)	70	14	10	18	17	11
Accidental Poisoning .....(X40-X49)	61	13	17	9	10	12
Accidental Drowning and Submersion.....(W65-W74, V90, V92)	59	11	7	9	15	17
Exposure to Smoke, Fire, and Flames.....(X00-X09)	48	10	11	11	7	9
Air Transport Accidents						
.....(V95.0-V95.3, V95.8-V95.9, & V96-V97)	29	*	10	4	7	6
Accidental Discharge of Firearms .....(W32-W34)	22	7	5	*	3	5
Exposure to Excessive Natural Cold.....(X31)	20	4	4	*	6	4
Contact with Agricultural Machinery.....(W30)	16	3	4	*	3	4
All Other Causes of Accidents	145	27	17	39	23	39

Note: \*Cells with less than 3 events.

Source: South Dakota Department of Health

### Method of Disposition

Table 38, on the next page, displays the different methods of disposition for the last 10 years. The top disposition in 2003 was burial with 5,675 deaths. The second highest method of disposition in 2003 was cremation with 1,321 deaths.

Since 1994, burial has been the highest method of disposition chosen

and cremation has been the second highest method of disposition chosen.

Cremation has also been on a steady increase since 1994. In 1994, cremation accounted for 9.0 percent of dispositions and in 2003 for 18.6 percent. This led to a 106.7 percent increase from 1994 to 2003 in cremation.

**Table 38**  
**South Dakota Resident Deaths by Disposition, 1994-2003**

Year	Type of Disposition					
	Total Deaths	Burial	Cremation	Removal from State	Donation	Other
2003	7,109	5,675	1,321	76	26	8
2002	6,886	5,627	1,148	72	24	11
2001	6,915	5,700	1,102	79	20	10
2000	7,014	5,859	1,038	86	20	8
1999	6,941	5,825	938	141	21	11
1998	6,850	5,808	829	175	25	5
1997	6,855	5,882	761	182	19	6
1996	6,793	5,843	720	209	16	*
1995	6,901	6,019	587	263	20	*
1994	6,724	5,845	607	245	21	3

Note: Failure of deaths to add to add to total is due to not stated disposition.  
Source: South Dakota Department of Health

